

# The Tech

OFFICIAL NEWSPAPER OF THE UNDERGRADUATES OF MASSACHUSETTS INSTITUTE OF TECHNOLOGY

VOL. LXXIII. NO. 28

CAMBRIDGE, MASSACHUSETTS, FRIDAY, SEPTEMBER 25, 1953

5 CENTS

## All-Tech Acquaintance Dance Tonight In Walker Memorial

An All-Tech Acquaintance Dance, open to all members of the Institute family, will be held tonight from 8:00 to 12:00 p.m. in Morss Hall, Walker Memorial.

Music for the evening will be provided by Hal Reeves, who promises some special arrangements for the occasion. Refreshments will be served.

The Technology Catholic Club, which sponsors this dance, has assured a large supply of girls—from Boston Teachers', B. U., Wellesley and many other colleges—for the \$1.25 admission price. Last year, girls had to be turned away from the door at this affair, usually the biggest and best of the annual fall acquaintance dances.

Only 400 men and 400 girls will be able to buy tickets to the dance. These tickets are now on sale in the lobby of Building 10, and those remaining unsold may be purchased at the door.

## WGBH Plans Theatre Seminar

A series of lectures, discussions and readings devoted to Shakespeare will be broadcast by WGBH on Sundays from 5 to 6 p.m., starting October 4, on the new series Theatre Seminar.

On the premiere program actress Eva LeGallienne will discuss Acting Shakespeare. On October 11 The Classic Revival of Shakespeare will be the subject of Lawrence Langner, founder of the Theatre Guild. John Burrell, former director of The Old Vic, will examine the problems in The Producing and Directing of Shakespeare between 5 and 6 p.m., Sunday, October 18, and on October 25 Theresa Helburn, co-director of the Theatre Guild, will talk about Understanding Shakespeare.

### BBC World Theater

In connection with this series of seminars WGBH will present on its regular Sunday night feature, the BBC World Theatre, during October three plays by Shakespeare: "Twelfth Night," "Richard II," and "The Tempest."

Theatre Seminar was prepared by Station WNYC, New York City's municipally owned station, in cooperation with the American Academy of Dramatic Arts and the American Shakespeare Festival Theatre and Academy.

## Pershing Rifle Smoker Next Monday In Walker

The National Honorary Society of Pershing Rifles will hold their semi-annual smoker in the Tyler Lounge of Walker Memorial on Monday, September 28, at 5 p.m. All interested freshmen are invited to attend.

The Pershing Rifles are a military and social organization, and their program of activities ranges from dances to military maneuvers. They also sponsor a trick drill team, which competes with other schools in this region.

### Pledge Period

Prospective members undergo a pledge period, during which they are drilled by the student officers of the Pershing Rifles, and become proficient in military matters. The organization has its own rifle racks, and regularly drills under its own officers.

Representatives of the Military Science Department will be present at the smoker, and refreshments will be served.

## New Grant Sets Up Lighting Design Lab

The establishment of a Laboratory of Lighting Design in the School of Architecture and Planning at the Institute was announced this week by Professor Lawrence B. Anderson, head of the Department of Architecture.

The laboratory, he said, has been inaugurated by an initial grant from the F. W. Wakefield Brass Company. Its broad program is a study "of all factors of environment which contribute to the process of seeing," according to Professor Anderson.

The laboratory's first public event was a Seminar on Vision, Brightness, and Design which began Sept. 23. Fifteen specialists in engineering, illumination, architecture, psychology, and physiology will participate in a two-day program.

The laboratory is designed to provide the School of Architecture with a center for studies of the effects of various distributions, quantities and qualities of light, heat, sound, color and other factors of environment.

The seminar was held at this time in order to help chart the course of the Laboratory of Lighting Design as its program develops during the coming years.

H. C. Weston, honorary secretary of the British Illumination Engineering Society of London and director of the British Medical Research Council's Group for Research in Occupational Optics, was the special guest at an informal seminar dinner at the M.I.T. Faculty Club.

Dr. Dorell B. Harmon, educational consultant of Austin, Texas, will be co-chairman with Professor Anderson of the seminar which begins this morning. Dr. Harmon is widely known for work in education, child development, and school planning, as well as for studies of design factors which enter into production and other industrial applications.

(Continued on page 2)

## Meeting Scheduled For Scholarship Applicants

There will be a discussion meeting for those students interested in studying abroad in 1954-55. Fulbright applicants, Rhodes Scholarship applicants, Buenos Aires Convention scholarship applicants, Marshall scholarship applicants, or any students interested in foreign study are most welcome.

The meeting will be at 5 p.m. on Thursday, October first, in the Library Lounge, 14E-310.

Former Fulbright and Rhodes scholars now returned to M.I.T. will be present to speak briefly and to answer questions.

Fulbright Committee members teachers and students with foreign study experience, and others interested in the international exchange of students will be there to talk to students about specific areas of study and about individual countries.

Students interested in study abroad under the various government and private sponsorships are urged to take advantage of this opportunity to talk with those who have had the experience of study abroad or are actively engaged in the administration of the interchange of students.

### T.C.A. SMOKER

A smoker will be held to acquaint interested members of the incoming class with the many functions of and opportunities within the T.C.A. at 5:00 p.m. on Tuesday, September 29, in the T.C.A. office on the second floor of Walker Memorial. Associate Dean of Students, William Speer will speak.

## Professor Tustin Of England Occupies New Webster Chair

Professor Arnold Tustin, distinguished British engineer and head of the Department of Electrical Engineering at the University of Birmingham, England, has been invited to occupy the Webster Chair of Electrical Engineering as a visiting professor at the Institute for the academic year 1953-1954.

The Webster Chair of Electrical Engineering was established in 1952 under a grant of \$400,000 from the Edwin Sibley Webster Foundation in memory of the late Mr. Webster, one of the Institute's most distinguished alumni.

In making the announcement, Dr. E. L. Cochrane, Dean of the School of Engineering, said that during his stay at M.I.T., Professor Tustin will participate in the development of teaching and research in the applications and uses of electric power.

Professor Tustin has mainly been associated with developments in the design of electrical machines, particularly of special direct current machines. His work for some years after graduation was in the application of electric motors and drives in industry.

One of the devices in the development of which he played a leading part was the gyroscopic stabilizer for guns in tanks, which is an outstanding feature of the well known British "Centurion" type of tank.

He has made substantial contributions to the development of the systematic theory of automatic control

systems, particularly in respect to the basic principles of direct current rotary amplifiers, the effects of characteristic types of non-linearity, the use of time-series methods in system analysis of control systems involving a human operator. As chairman of the organizing committee, Professor Tustin was largely responsible for the outstanding success of the first International Conference, under the sponsorship of the British Ministry of Supply, held at Cranfield, England, in July 1951.

Recently Professor Tustin has turned his attention to the wider implications of system analysis. His book, "The Mechanisms of Economic Systems," about to be published, covers the techniques which the engineer applies to the analysis of the causes of booms and slumps and the design of means of quantitative economic regulation. He is also interested in the application of system analysis to the problems of the human nervous system, though he is more cautious and skeptical than some contemporary writers on this topic.

Professor Tustin believes that the education of engineers must be designed, in the first place, for their full development as mature human beings, and he is prepared to accept specialization where necessary to permit cultivation of human sensitivity and wide perspectives. To this end he has introduced as part of the undergraduate teaching at Birmingham a

(Continued on page 4)

## DormComm Pledges Vigorous And Efficient Enforcement Of Rules

### Debating Team To Hold Smoker This Tuesday

Plans for the coming year will be discussed at the Freshmen Smoker of the Debating Team, which will be held this Tuesday, September 29 at 5:00 p.m. in the Faculty Lounge, Walker Memorial.

The general topic for discussion this year will be: Resolved: The United States should adopt a policy of free trade.

Among the rest of the year's plans is a Freshmen Tournament to be held two weeks after the smoker. In addition four men will be sent to the first New England Tourney of the season at the University of Vermont, to be held in Burlington, Vermont during the first week in November.

### G. R. E. Applications Are Now Available

The Graduate Record Examinations, required of applicants for admission to a number of graduate schools, will be administered at examination centers throughout the country four times in the coming year.

This fall candidates may take the GRE on Saturday, November 14. In 1954, the dates are January 30, May 1, and July 10. Each applicant is advised to inquire of the graduate school of his choice which of the examinations he should take and on which dates. Applicants for graduate school fellowships should ordinarily take the designated examinations during the fall semester.

The GRE tests offered in these nationwide programs include a test of general scholastic ability and advanced level tests of achievement in seventeen different subject matter fields.

Application forms and a Bulletin of Information, which provides details of registration and administration as well as sample questions, may be obtained from college advisers or directly from Educational Testing Service, P. O. Box 592, Princeton, N. J.

### Army R.O.T.C. Quotas

### Unfilled In Most Units

As of noon this Tuesday the manpower quotas of all but one of the Army R.O.T.C. units at the Institute had not been filled, although as recently as last spring there were 47 more eligible men who had signed deferment agreements than there were places allotted for them.

To help fill the gap a few Juniors in the upper 10 per cent of their class from the Air Force R.O.T.C. will be permitted to enter the Corps of Engineers and the Signal Corps. Army R.O.T.C. men will be given preference however. No Air Force R.O.T.C. Seniors will be allowed to transfer into any of the Army units without the permission of the Secretary of Defense.

Following is a chart showing the relative numbers of men needed under the Army's quota in each unit, the number of eligible students who signed deferment agreements and asked to be placed in each unit, and

(Continued on page 2)

Open House regulations for the undergraduate dormitories in the coming year have been made public by the Dormitory Committee. The entire report of the committee is printed below.

The rules are materially unchanged from those in force last year, but the committee has made it clear to every dormitory resident that enforcement of the regulations will be "vigorous and efficient," and that violators will be severely punished.

Included in the report below is a motion passed by the committee, designed to eliminate the violent type of freshmen hazing that resulted in considerable damage to the dormitories last year.

### Report On Dormitory Rules

"The rules of the M.I.T. dormitory system are simple and few. Their common basis is an individual respect for the rights of others within the living group and group respect toward our neighbors.

"Our Open House rules rank among the most liberal in the nation, and the great degree of student autonomy in the enforcement of these rules is unique. Yet, mass complacency has left us blind to the fact that these rules may be severely restricted or even completely abolished at any time.

"The Administration has reserved the right to restrict Open House hours, if it feels that the student body is showing laxity in regard to the rules. A consistently high rate of violations during the past few years has brought the situation to a critical stage, and the Dormitory Committee has succeeded in placating the Office of the Dean of Students only by a promise to enforce the rules as vigorously and efficiently as possible.

"Individual violations of Open House rules will be treated firmly, but fairly. Since each violation adds to the imminent danger of the entire dormitory resident group losing its privileges, the Dormitory Judicial Committee will be forced in many cases to the extreme punishment of expulsion from the dormitory system.

"Please remember that our Open House rules are a responsibility, not a right. We deserve to keep them and shall keep them only as long as we respect and obey them.

### Dormitory Regulations

"The Dormitory Judicial Committee has the right to expel any student from the dormitories and to recommend expulsion from the Institute for any of the following violations:

(Continued on page 4)

## Frosh Athletic Tests Will Be Given Again

Ivan J. Geiger, Director of Athletics, has announced that athletic tests will be given again for the seventy-five freshmen who did not take them during Freshman Weekend. These men must take them this Saturday at 2 p.m. on Briggs Field.

The tests, new at the Institute, consist of six parts—pushups, situps, squat thrusts, dodge run, standing broad jump, and a basketball throw. Five percent of the Class of '57 were unable to do the required ten pushups, while eleven and a quarter percent did not reach the twenty-five situp mark.

The Athletic Department considers the tests successful.

# The Tech

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## Editorials

### THE GOAL OF EDUCATION

That today's student too often exhibits a marked aversion towards liberal and political discussions has, in recent years, become so evident as to be alarming. Investigations of the nation's universities are perhaps responsible for the new attitudes of caution and reluctance on the part of both students and instructors to take part in discussions of controversial issues and express their own political convictions and opinions. Association with "liberal" organizations (no matter how non-communist they may be) has come to be considered a "kiss-of-death"—a branding of racialism, and most students are reluctant to participate. The climate on campuses has become one of refrain—"don't say; don't write; don't do."

This situation alone has caused some people to considerably doubt the ability of colleges to produce rational and objective scholars. They question too, whether or not education is losing its "boldness". What makes the situation more frightening is an apparent "disaffiliation" and disinterest on the part of the student from the political and international activities which are evidently the cause of it all. Real thinking along such lines appears to have been dispensed with for lack of either time and interest, or intellectual stimulation.

The scientist, as well as any other citizen, should have a more than passive interest in our current national policies. It has been demonstrated very clearly since the outbreak of World War II that technological advance goes hand in hand with political actions. And although it is not likely that our scientists will train for, or become political administrators, an assurance that they understand the problems facing these men is imperative.

Unfortunately the student does not often stop to evaluate, for himself, the education that he is getting. The success of alumni and an extremely encouraging career outlook for graduates often leads one to assume that he is better educated than he actually is—that he is fully prepared to face, and solve the personal and world problems he will encounter. One of the dangers that faces our nation is unconcern in peaceful times. We can hardly expect it to be any less of a danger now.

The student owes it to himself to seek more than a technical knowledge when he has the opportunity to help insure a common security by merely THINKING for himself.

### WELL-ROUNDED MEN

It has long been the habit of the "enlightened" student to bemoan the fate of the brownbagger and extol the virtues of the "well-rounded man". Much time is spent in propaganda barrages describing the glories of a liberal and "fuller" life. The brownbagger, however, often comes out of his shell only long enough to resharpen his pencils. One look at the self-styled, well-rounded man, whose cry for "breadth, depth and diversity", are merely excuses for aimlessness, is sufficient to send the brownbagger scurrying back to his monastic cell.

But the brownbagger has been chastized long enough. He has little to gain from the "well-rounded man" who boasts a liberal education with broad intellectual background via the *Saturday Evening Post*, *The New Yorker*, and the *Reader's Digest*; who is adept at golf, bridge and collecting locker room anecdotes and stag party ballads; and is able to rest one arm on the mantle-piece, dangle a cocktail in one hand and pat a pedigreed hound fondly with the other.

There are two extremes.

## Robert J. Holden Is New T.C.A. General Secretary

Robert J. Holden, prominent Unitarian minister and leader in civic affairs in New Bedford, is general secretary for the Technology Christian Association at the Institute this year.

As general secretary, Mr. Holden has administrative responsibility for the T.C.A.'s diversified program of service to the M.I.T. student community. He is working closely with Associate Dean William Speer in planning for the use of the Institute's new auditorium and chapel.

### Succeeds Ross

Mr. Holden succeeds Wallace M. Ross, T.C.A. general secretary since 1934, whose retirement was announced last June. Mr. Ross, a graduate of Dartmouth in 1909, first came to the Institute in charge of student employment and lodging in 1919. He is continuing a part-time association with the Technology Christian Association.

In announcing the appointment, Dean Bowditch said: "Mr. Holden's experience in Cleveland as Assistant to the late Dr. Everett M. Baker, former Dean of Students at M.I.T.; his wide experience in the Division of Education of the American Unitarian Association; his experience as a Navy Chaplain; and the emphasis in his ministry on work with young people and community relations all combine to give him a rich background for participation in increasing opportunities at M.I.T. for students to develop spiritually and to serve the community through social service activities."

Present T.C.A. activities for M.I.T. students and staff include a used book and instrument exchange; student housing registry; travel and ticket services; annual drives for blood donations, used clothing and National Student Association contributions; boys' work programs in Greater Boston settlement houses and boys' clubs; a rental library of prints and reproductions; an active program of re-

ligious conferences, discussions, and other group meetings.

Mr. Holden was born in Natick, Mass., and attended the Natick public schools. He graduated from Albion College in Albion, Michigan, in 1939 and from the Harvard Divinity School in 1942.

### Very Active In Community

Mr. Holden has been active in the American Unitarian Association, with assignments in the Ministerial Aid Committee, the Scholarship Aid Committee, and the Advisory Committee of the Division of Education; he has been chairman of the Teacher Training Institute for the New England region and of the Leadership Training Committee of the Division of Education. His community activities in New Bedford have included work with the Legal Aid Society, the North End Guild, and the Y.M.C.A.

### R.O.T.C. Quotas

(Continued from page 1)

the actual number of men who have actually reported this autumn up to the present time:

Unit	Authorized Quota	Eligible and signed agreement	number of men enrolled this Autumn
Corps of Engineers	35	35	30
Ordinance Corps	32	36	24
Signal Corps	22	22	17
Chemical Corps	24	50	50
Army Security Agency	31	40	29
Quartermaster Corps	15	21	8

The Army emphasizes that not all men enrolled as Juniors in the Army R.O.T.C. may receive commissions upon graduation and that if the student does receive a commission, it may be in a branch other than the one in which he receives his training.

### Lighting Design Lab

(Continued from page 1)

Professor Anderson is chairman of the project's advisory committee, of which Parry Moon, Associate Professor of Electrical Engineering, and Carl M. F. Peterson, Superintendent of Buildings and Power, are members. Its staff includes Richard W. Hamilton, Research Associate, and two technical assistants, Arthur Aldersley-Williams and Derek Phillips.

## Autumn Tourney Is Ahead For All Tech Racquetmen

According to Jack Summers, Institute tennis mentor, September 30 is the closing date for entries in the M.I.T. fall tennis tournament.

Prospective netters may sign up for the matches either outside the squash office (behind the pool), or by calling Jim Alexander at Extension 488. The draw will be posted as soon as possible. Matches can be played at any time.

The coach added that the results of the coming tourney will help determine berths on the frosh and varsity squads in the spring.

### after hours

#### DANCES

**FRIDAY, SEPTEMBER 25**  
Mass. General Hospital—the senior class of student nurses present their first monthly dance of the year. A short walk over the Longfellow Bridge; "get there early." The dance starts at 8:30 pm. Admission: 50c the girls are just about the best in town. Recorded music.

**P.A.L. Acquaintance Dance**—at the Boston Y.W.C.A., 40 Clarendon Street. Starts at 8:15 pm, admission is 50c. and there will be an orchestra. Past dances have been good ones.

**Lasell Junior College**—If you can roundup a car or have a M.T.A. route map, this dance in West Newton may mean an enjoyable evening for you. Starts about 8:30 pm.

**All-Tech Acquaintance Dance**—For the stay at home who prefers having his girls coming to him. Music by Hal Reeves Orchestra in Morse Hall, Walker Memorial. Sponsored by the Catholic Club, the dance will run from 8 pm-12pm. Admission is \$1.25.

**SATURDAY, SEPTEMBER 26**  
Simmons College—the annual freshman acquaintance dance in Boys Latin High School on Louis Frank Avenue near the Simmons College campus. If you lose your way enroute, ask the nearest pretty girl. Be prepared to meet many sweet young things at the dance and many not so sweet young things from Harvard, B.U., and Tech.

#### SCREEN

**"From Here To Eternity"**—Now is playing at the Orpheum. This picture adds exceptional acting by Burt Lancaster, Montgomery Clift and Frank Sinatra to a fine adaptation of the powerful novel by James Jones. Certainly one of the year's best.

**"The Cruel Sea"**—From the novel by Nicholas Monsarrat. This movie recreates the actions and feelings of men at sea during wartime. Filmed in Britain, now showing at the Exciter.

**"The Moon Is Blue"**—The Navy's banned it, but don't get excited. A piquant comedy about a frank young girl in the midst of sophisticated New York. At the Astor.

#### THEATER

**Shubert**—"The Teahouse of the August Moon", a comedy with David Wayne and John Forsythe, opens on Monday. This is the first in the series of the Theatre Guild American Theatre Society subscription plays.

**Wilbur**—Arlene Francis and Lucile Watson star in this new comedy by Rosemary Casey, author of "The Velvet Glove", opening Tuesday.

Send contributions to Bjorn Rossing 418 Baker or John Seiler 515 Wood

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Field Day Spirit Lacking  
In Both Frosh And Sophs


By Phil Bryden '56

What with all the new innovations in the freshman athletic program, perhaps this year's freshman Field Day teams will be as apathetic as some of the recent sophomore teams. In recent years the freshman class has been able to compete with the sophomores only by outnumbering them. So far the class of 1957 has not shown too much spirit, although the frosh swimming team has an excellent turnout of thirty aspiring mermen. However, it's only the beginning of the semester and they have not had too much of a chance, and very few of the Field Day sports have even started.

The frosh are not the only ones who have not made much noise this fall. Last year the upperclassmen were calling the class of '56 the most spiritless incoming class in many years, and it seems to have carried over to this year. None of the soph teams have begun practices as yet—as a matter of fact the football team can't even find a coach — and the turnout cannot even be estimated, but twenty football players cannot hope

(Continued on page 4)

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Dr. Rosen Teaches Frosh  
New Course In Language

Dr. Charles Welles Rosen, a distinguished pianist as well as student of modern languages, history, and art, is a new assistant professor of modern languages at the Institute.

Dr. Rosen is responsible for basic courses in history and literature which are taught in the French language this year to a few selected freshmen. This unique experimental program is made possible by a Rockefeller Foundation grant of \$19,800.

**Must Have Humanities**

Students in this experimental group must fulfill the humanities requirements of all underclassmen. Materials which are read in English by students in the regular humanities courses are read in French by this group. Lectures are given in French.

Dr. Rosen, who has been in France since 1951 on Fulbright scholarships for foreign study, was in Paris last summer collecting the French language books and other materials which are needed by the experimental section.

Dr. Rosen was born in New York City in 1927 and attended the public schools there. He received his Bachelor of Arts degree with highest honors from Princeton University in 1947 and continued his studies at Princeton from 1947 to 1951 holding four distinguished fellowships in modern languages and literature. He was an assistant in instruction in the Princeton Department of Modern Languages and Literatures from 1948 to 1950 and received the M.A. and Ph.D. degrees from Princeton in 1949 and 1951, respectively.

**Made Debut As Pianist**

Dr. Rosen made his debut as a pianist in New York in March, 1951, and he has subsequently played concerts in Paris, Geneva, Zurich, Berne, Rome, and Pisa. He has studied piano with Moriz Rosenthal and Hedwig Kanner-Rosenthal and composition and counterpoint with Dr. Karl Weigl, and has made recordings of sonatas, etudes, and other piano works of Mozart, Debussy, Poulenc, Haydn, and Martinu.

The experimental French-language humanities program under Dr. Rosen's direction is open to ten students who

appear adequately prepared and who volunteer to participate in it. A similar French-language group will continue during the sophomore year.

During the last two years at the Institute, while concentrating their work in one of the twenty fields of science, engineering, management, or architecture and planning, these students may continue their French language studies by choosing from several courses in French literature offered in the Department of Modern Languages.

The student who makes this choice according to Professor William N. Locke, head of the Department of Modern Languages, will have "the equivalent of a very fine major in French in addition to his professional major in a science or engineering field, both in the time usually required to achieve only one of these goals."

"He will have an extraordinary education," says Professor Locke, "a breadth of cultural background unexcelled among American graduates in science and engineering."

— THE TECH —  
WALKER MEMORIAL

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SEPT. 27 IS STUDENT SUNDAY

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EARL W. FEDJE, Student Advisor

Morning Worship 11:00 A.M.  
Student Group 7:30 P.M.

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**Dormitory Rules**

(Continued from page 1)

1. Violation of the Open House rules described on the following page.
2. Excessive noise or disturbance detrimental to general study conditions.
3. Damage, destruction, or illegal possession of dormitory property.
4. Use or storage of chemicals or ammunition within any dormitory without the written consent of the Dormitory Judicial Committee.
5. Throwing missiles of any sort from the roofs or windows of the dormitories or setting off explosives within the buildings proper.
6. The use of fire extinguishers for any purpose other than their proper one.

**Field Day**

"To preserve study conditions in the dormitory system, especially before Field Day, the Dormitory Committee has passed the following motion with explanation:

Group demonstrations, specifically riots and freshmen-sophomore raids, within the dormitory buildings are to be discouraged, as they are a detrimental influence on study conditions and often result in property damage. Any person taking part in such a demonstration within the dormitory buildings which results in damage or disrupts general study conditions will be subject to disciplinary action by the Dormitory Judicial Committee and will face expulsion from the dormitory system or possible expulsion from the Institute.

**Open House Rules**

"The Open House Hours specify the times during which women are allowed in the dormitories. The presence of women in the dormitories at any other time constitutes a violation of these rules."

**Hours**

Monday-Thursday 5 p.m.-8 p.m.  
 Friday 5 p.m.-1 a.m.  
 Saturday 12 noon-1 a.m.  
 Sunday 12 noon-10 p.m.  
 Reading Period regular open  
 Examination Period house hours  
 Holiday hours will be 12 noon-10 p.m., with regular hours on Friday and Saturday holidays.  
 Days before official school holidays will have 5 p.m.-1 a.m. hours, except when the holiday falls on a Monday in which case the Sunday hours will be 12 noon-1 a.m.  
 Vacation hours will be 12 noon-1 a.m. (last day of vacation 12 noon-10 p.m.)

**Extension of Hours**

The Dormitory Committee with the approval of the Office of the Dean of Students has extended the above hours for the following events, and these only:

Junior Prom Formal, 3 a.m.  
 Dorm Christmas Formal, 2 a.m.  
 Scabbard & Blade Formal, 2 a.m.  
 Assemblies Ball, 4 a.m.  
 All-Tech Dance, 2 a.m.  
 Dorm Weekend Formal, 2 a.m.  
 Open House Hours for Lounges

**East Campus****Lobby—Burton Room**

9 a.m.-1 a.m. daily for women  
 Crafts Library—Crafts Lounge  
 Sign up with lounge chairman; available from 5 p.m.-1 a.m.  
 All other recreation rooms follow regular open house hours.

**Burton House**

Lobby—New Lounge—410 Lounge  
 9 a.m.-1 a.m. daily for women  
 Snack Bar

9 a.m.-12 p.m. daily

Radio—TV—Ping-Pong Rooms  
 Regular open house hours. With the approval of the House Committee, extension is possible, but never to exceed hours of 9 a.m.-1 a.m.

**Baker House****Lobby**

Main Lounge  
 Dining Hall & Balcony  
 Ping-Pong, Billiards, 9 a.m.-1 a.m.  
 and Music Rooms  
 Baker Lounge

After hours, in emergencies only, women will be allowed to enter the Burton Room in East Campus, the Main Lounge in Baker House, and the New Lounge in Burton House as well as the desk areas in these houses. Such entrance will be allowed only at the discretion of the desk clerk, who will assume responsibility for the situation.

## Collision Of Nuclear Particles Not Necessary For Reaction

Research in the physics laboratories at the Institute has produced evidence that an actual collision of nuclear particles is not necessary for a nuclear reaction; the particles can react even though they merely brush past each other.

Dr. Clark Goodman, associate professor of physics, and Clyde McClelland, research assistant, believe that this is the first experimental evidence that nuclear projectiles need not score a bulls-eye to cause nuclear reactions. Their results were announced last month in the *Physical Review*.

**Different From Chemistry**

"When a gasoline molecule bumps into an oxygen molecule and the two interact, chemical heat is produced which drives your car," explains Professor Goodman. "Similarly a nuclear reaction, such as those produced in a cyclotron, takes place when the bombarding particle strikes the core or nucleus of a target atom. The recent work at M.I.T. shows that nuclei can also undergo reactions without actually being struck."

In the studies at the Institute, hydrogen nuclei — called protons — were accelerated by one to two million volts in a Van de Graaff-type electrostatic generator. These fast-moving protons, passing near — but not striking — the nuclei of any of several heavy elements, caused the heavy materials to give off high-energy x-rays.

**Protons of Too Low Energy**

The protons, says Professor Goodman, had such low energy that "they could never get near enough to do more than wave at the heavy metal nuclei" — yet they clearly produced high-energy x-rays (called gamma

rays) which were measured and counted by a scintillation spectrometer.

"Putting this reaction on the same scale as our solar system," says Dr. Goodman, "it is as though a large meteorite, about half as big as the moon, whizzed by the earth at a distance of about 30,000 miles. The gravitational effect would create enormous wreckage on the earth's surface, even though our planet were never actually struck."

"In the same way," says Dr. Goodman, "the electrical effect of our fast-moving protons may be quite large though they never actually strike the nucleus."

These results have been anticipated by the theoretical studies of several scientists, including Professor E. Guth at the University of Notre Dame and Professor Victor Weisskopf at the Institute. Since the discovery, the results have been confirmed by scientists in Denmark, at Duke University (Durham, North Carolina) and the Canadian atomic energy laboratories at Chalk River, Ontario.

Dr. Goodman emphasizes that the new technique offers no promise as a source of nuclear energy. But it does, he believes, "open the door a little wider to the secrets of nuclear structure which nature continues to hide so zealously."

These low-energy reactions are of particular interest in physical research because the amount of energy involved is so low that other nuclear effects are impossible. Thus there are no side-effects, and it is relatively easy to study the reactions.

The work reported, say the researchers, is typical of how new find-

**Beaver Barks**

(Continued from page 3)

to smear the freshmen. Even if the sophomores manage to find the manpower they had last year, they cannot win on that alone. Remember who won Field Day in 1952. A combination of good spirit on the part of a sizeable number of sophs will give them a good chance, but someone has to be willing to do a lot of hard work.

Despite the seeming apathy of both classes, so far at least, the Field Day debacle will be an exciting battle. Even though it is a duel to see who can make the fewest mistakes.

**Intramurals Begin**

To get away from the Field Day activities, the 1953 intramural touch football season will be commencing in a short time. Both fraternities and dorms will be competing in several leagues, all hoping to take the bunting symbolic of Institute championship. In recent years the intramurals have attracted a great deal of interest, especially among the fraternities, and this year the program should be a good one.

**On the Outside**

Outside the Institute, there is little doing in the way of sports these days. The college football season is just starting, and there will be much interest in the new substitution rule. Still there will be few good spectator contests until the pro hockey and basketball seasons begin in October. Would anyone like to make any bets on Field Day?

ings may come as fortunate — and unexpected — by-products of scientific activities. The original research was devoted to studying the reactions of one to two million volt protons with chromium and vanadium. The chromium and vanadium samples were mounted on plates of tantalum, and the first hint of the new effect came when unpredicted gamma rays appeared during the experiments.

## Tech Soccer Varsity Announces Nine Games Open With Boston U.

A schedule of nine games has been announced for the Beaver varsity soccer team this fall.

The soccermen, under the coaching of Ben Martin, hope to improve on last year's two-six-one record. The season will start on Saturday, October 10, with a game against Boston University on Briggs Field, and close on November 7. The schedule is as follows:

Oct. 10—Boston Univ. .... Home  
 Oct. 13—Brandeis ..... Waltham  
 Oct. 17—Amherst ..... Amherst  
 Oct. 21—Tufts ..... Home  
 Oct. 24—R.P.I. .... Troy  
 Oct. 28—Harvard ..... Harvard  
 Oct. 31—U. of Connecticut ..... Home  
 Nov. 3—Brown ..... Providence  
 Nov. 7—W.P.I. .... Home

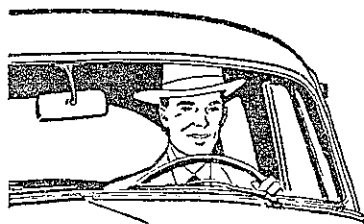
All home games will be played on Briggs Field.

**Professor Tustin**

(Continued from page 1)

novel scheme of student groups for the discussion of broad non-technical topics. This method has achieved considerable success over the last seven years, and has the warm support of his students. He hopes during his stay at M.I.T. to develop further his analysis of the combination of technical and general education that is called for by the social needs of the future, and to profit by participating in the pioneer work that is being done by M.I.T. in this field.

Professor Tustin will be accompanied on his visit to M.I.T. by his wife, who is a specialist in the psychotherapy of children, and who hopes also to find opportunities in the United States for interchange of experience with workers in her field.



### You're "sitting pretty" behind the wheel

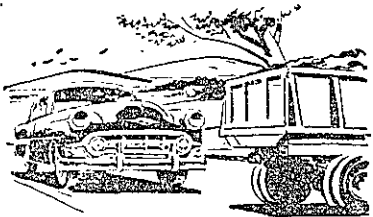
Take this Bel Air model. First thing you'll notice is the quality of the interior. Rich-looking appointments. Roomy seats with foam rubber cushions. Turn the key to start the engine and you're ready to go.

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You look out and down through a wide, curved, one-piece windshield. The panoramic rear window and big side windows provide a clear view in all directions.

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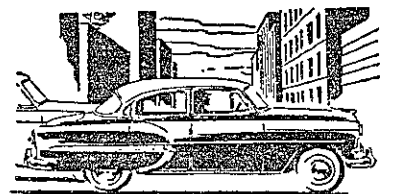
I figure this demonstration saved me many hundreds of dollars!

I expected to pay that much more for a new car until I discovered I was better off in every way with this new Chevrolet!

Let us demonstrate all the advantages of buying a Chevrolet now!



MORE PEOPLE BUY CHEVROLETS THAN ANY OTHER CAR!

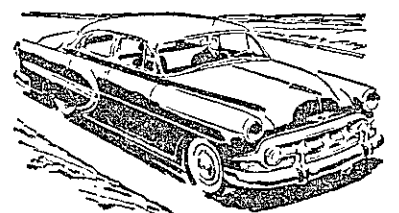


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A lot finer performance on a lot less gas. That's what you get with the new Powerglide automatic transmission. There's no more advanced automatic transmission at any price.

### You get more power on less gas

That's because Chevrolet's two great valve-in-head engines are high-compression engines. In Powerglide\* models, you get the most powerful engine in Chevrolet's field — the new 115-h.p. "Blue-Flame." Gearshift models offer the advanced 108-h.p. "Thrift-King" engine.



### It's heavier for better roadability

You're in for a pleasant surprise at the smooth, steady, big-car ride of this new Chevrolet. One reason is that, model for model, Chevrolet will weigh up to 200 pounds more than the other low-priced cars.

\*Combination of Powerglide automatic transmission and 115-h.p. "Blue-Flame" engine optional on "Two-Ten" and Bel Air models at extra cost.

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